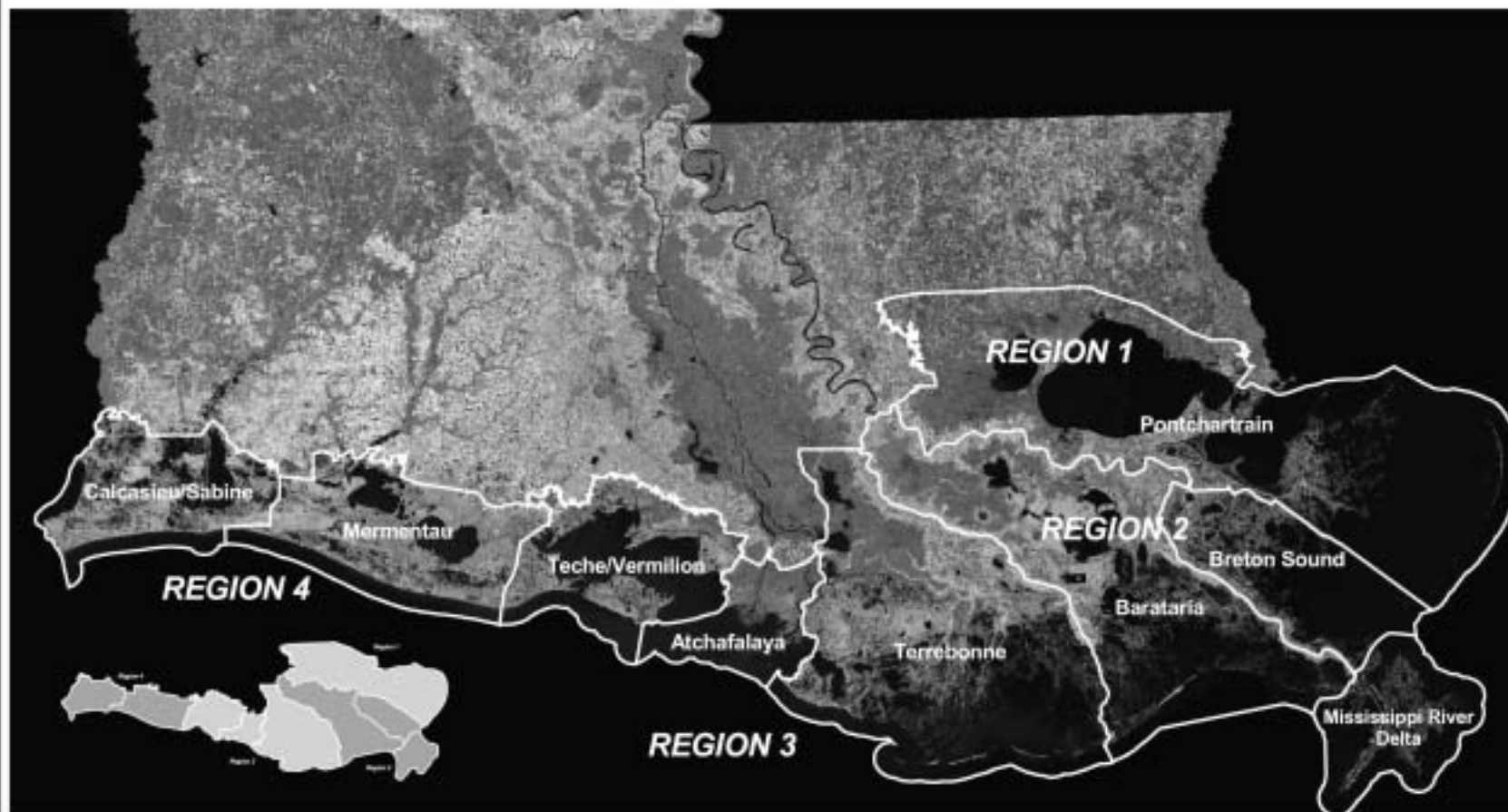
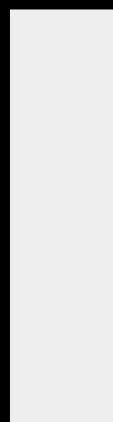
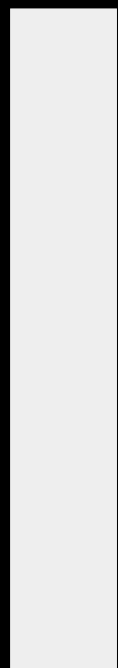


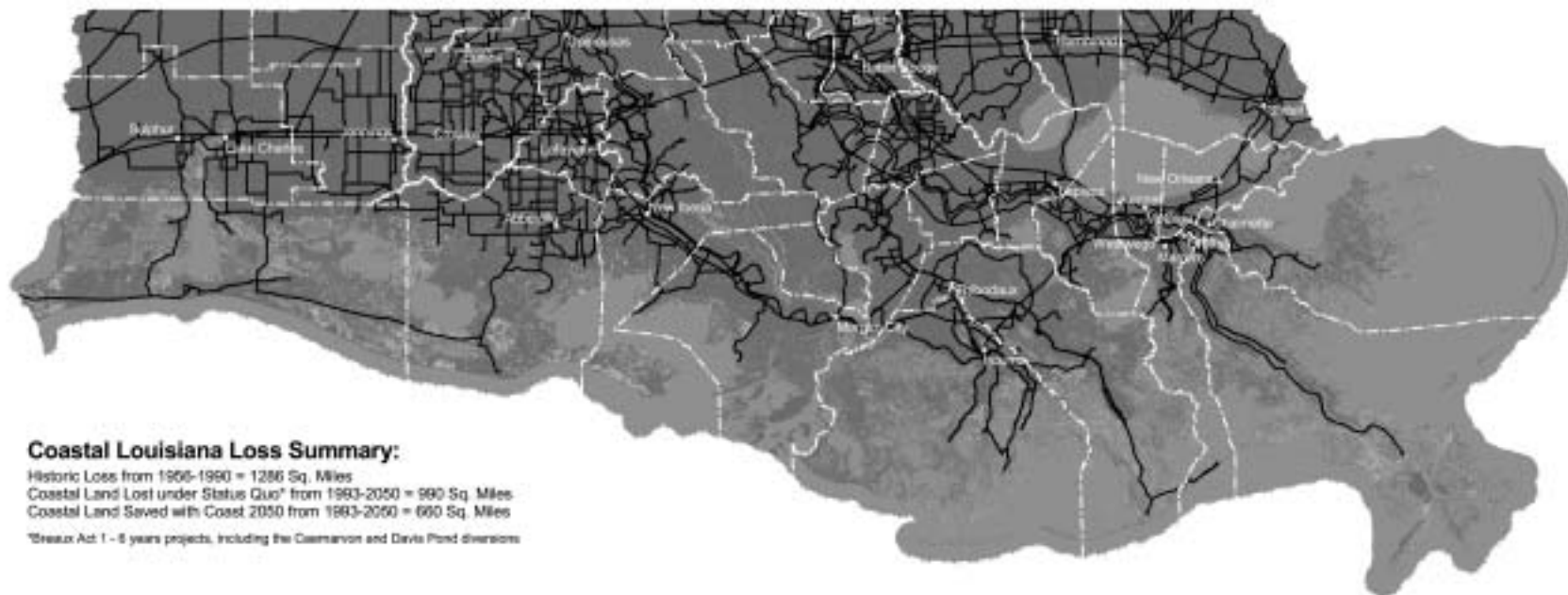
**Louisiana Coastal Area
Comprehensive Coastwide Ecosystem Restoration Feasibility Study
Regions & Associated Hydrologic Basins**



Map Prepared By:
US Geological Survey
National Wetlands Inventory Center
US Army Corps of Engineers Project Office
New Orleans, LA 70118
Inventory Period: 1981-2000
Map ID: 2002-10-001
Map Date: April 1, 2002



Coastal Louisiana Existing and Predicted Land Loss Trends 1956 - 2050



Coastal Louisiana Loss Summary:

Historic Loss from 1956-1990 = 1286 Sq. Miles
Coastal Land Lost under Status Quo* from 1993-2050 = 990 Sq. Miles
Coastal Land Saved with Coast 2050 from 1993-2050 = 690 Sq. Miles

*Breach Act 1 - 8 years projects, including the Caernarvon and Davis Pond diversions

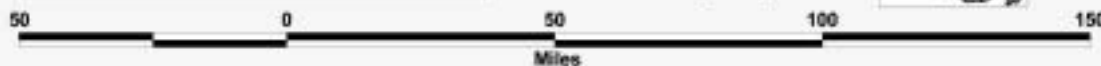
- Legend**
- Municipality = 10,000
 - ▬ Parish Boundaries
 - ▬ Primary Roads
 - 1993 Water
 - 1993 Land + Gains under Status Quo
 - 1993 - 1999 Land Loss
 - 1993 - 2050 Predicted Land Loss under Status Quo



1:485,000



Map Index



This document is a product of the United States Geological Survey, National Wetlands Inventory, Coastal Resources Division, Coastal Resources Field Office, 4400 Highway 101, Lake Charles, LA 70601-5001. Map produced by the Coastal Resources Division, U.S. Geological Survey, Lake Charles, LA 70601-5001. Map Date: February 27, 2002

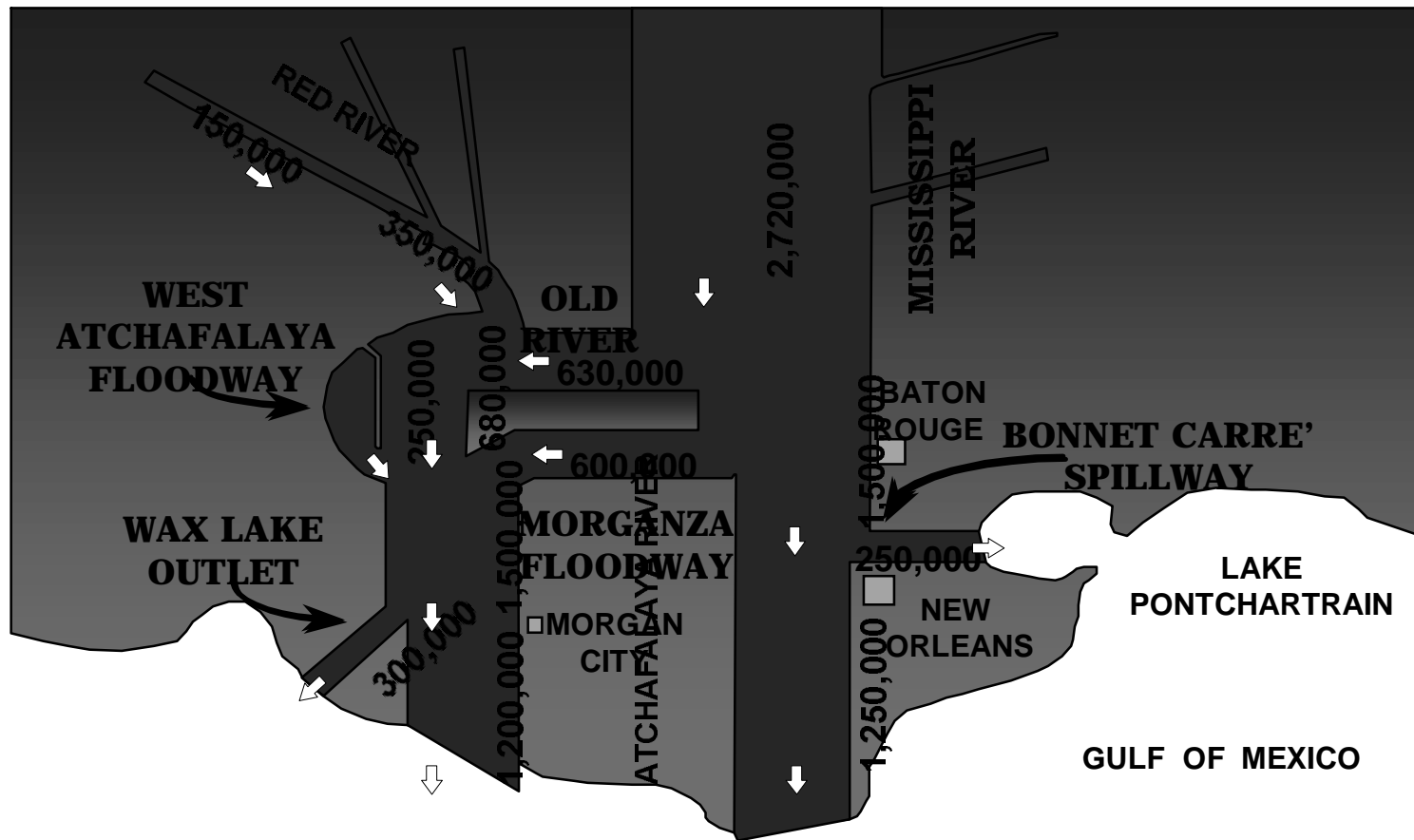
IMPORTANCE OF THE MISSISSIPPI RIVER TO COASTAL LOUISIANA

- The Mississippi River created a unique coastal ecosystem in south Louisiana through deltaic processes over thousands of years



Flood Control Works

Project Design Flood



Major Causes Of Wetland Loss

Barrier
Island
Degradation



Storms



Salt Water
Intrusion



Canals



Oil & Gas
Development



Subsidence



Sea Level
Rise



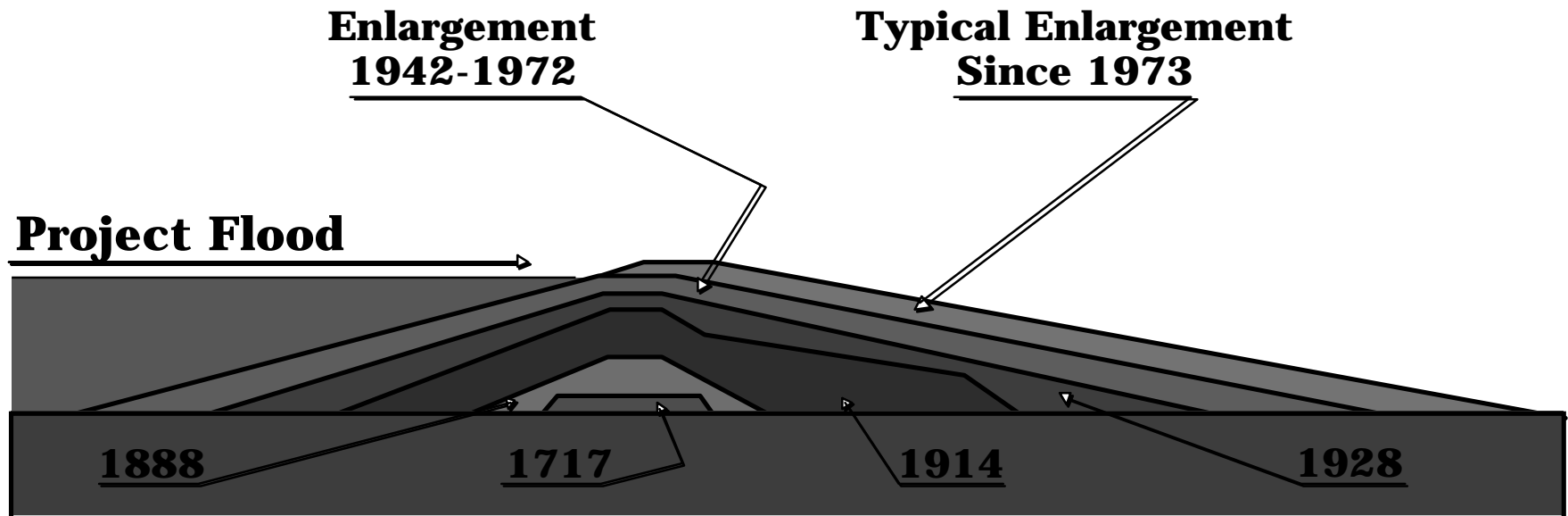
Sediment
Reduction

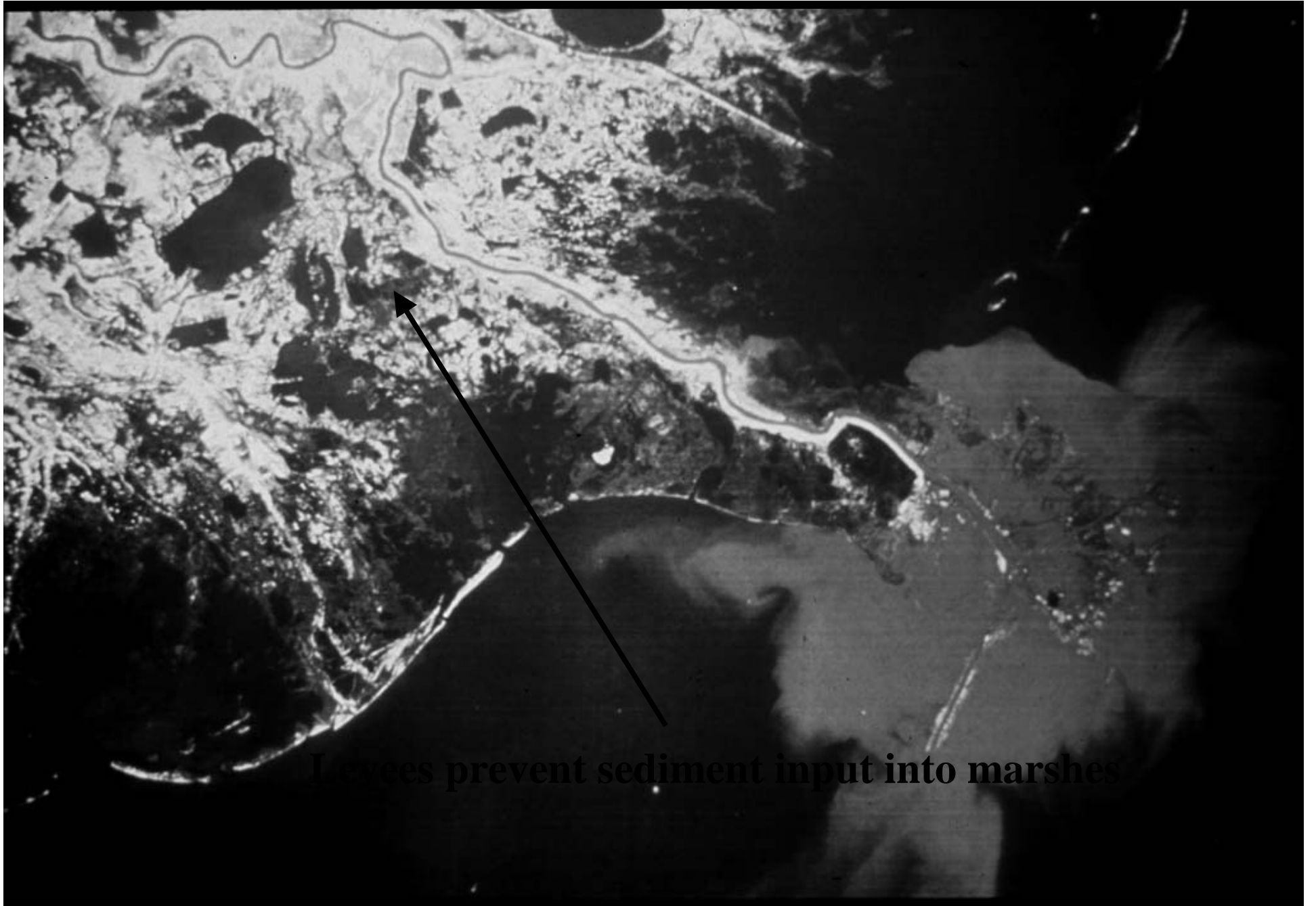


Levee
System



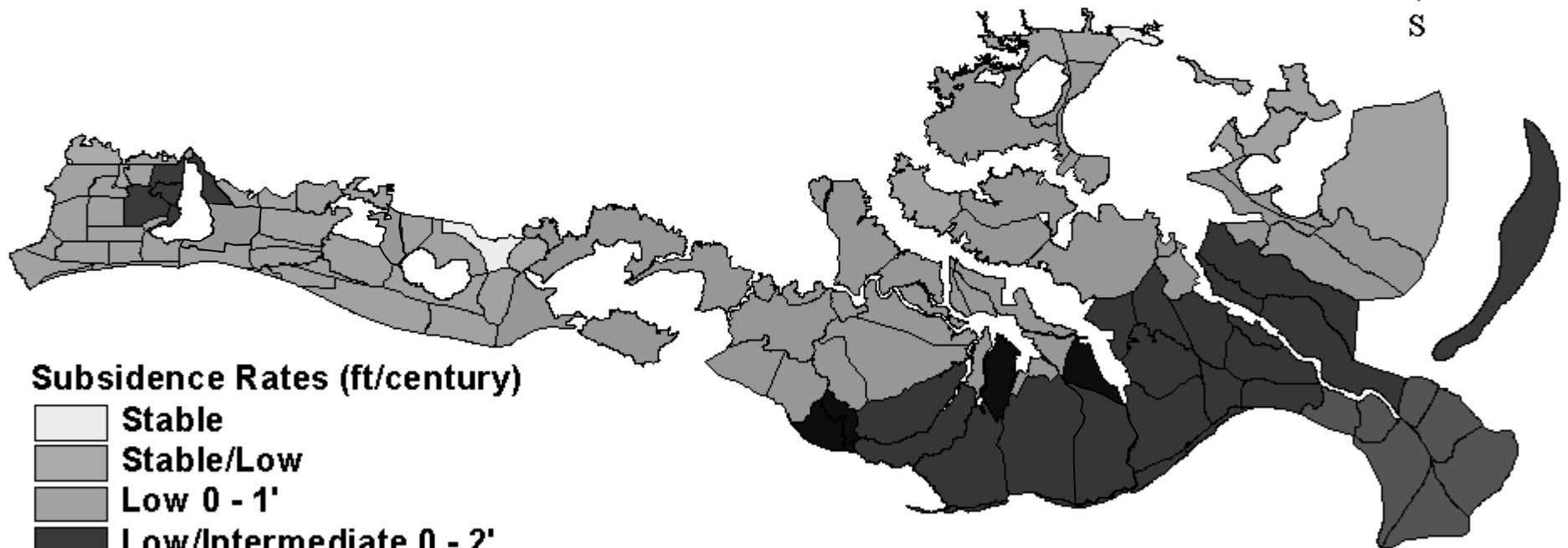
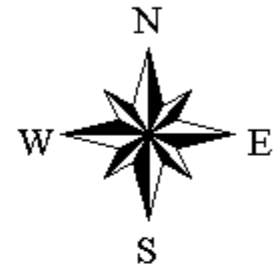
Evolution Of Mississippi River Levees



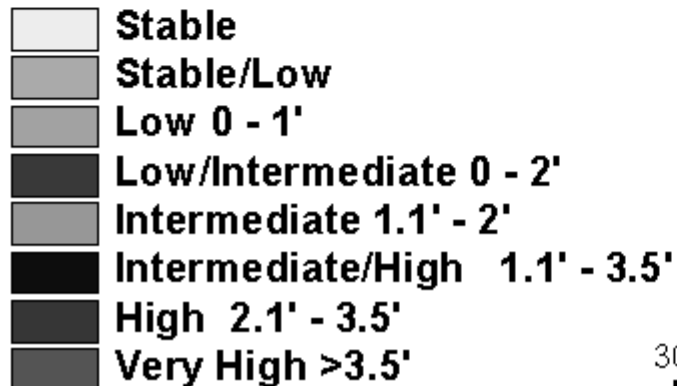


Levees prevent sediment input into marshes

COASTAL SUBSIDENCE RATES



Subsidence Rates (ft/century)



What's at Stake

COASTAL WETLAND LOSS

A threat to:

- a regional & national economy,*
- the safety of the public,*
- and a unique heritage & lifestyle*



Potential Restoration Solutions

★ **Types of Projects**

- **River Diversions**
- **Marsh Creation**
- **Barrier Restoration and Shoreline Protection**



Big Mar

**Caernarvon Freshwater
Diversion Structure**

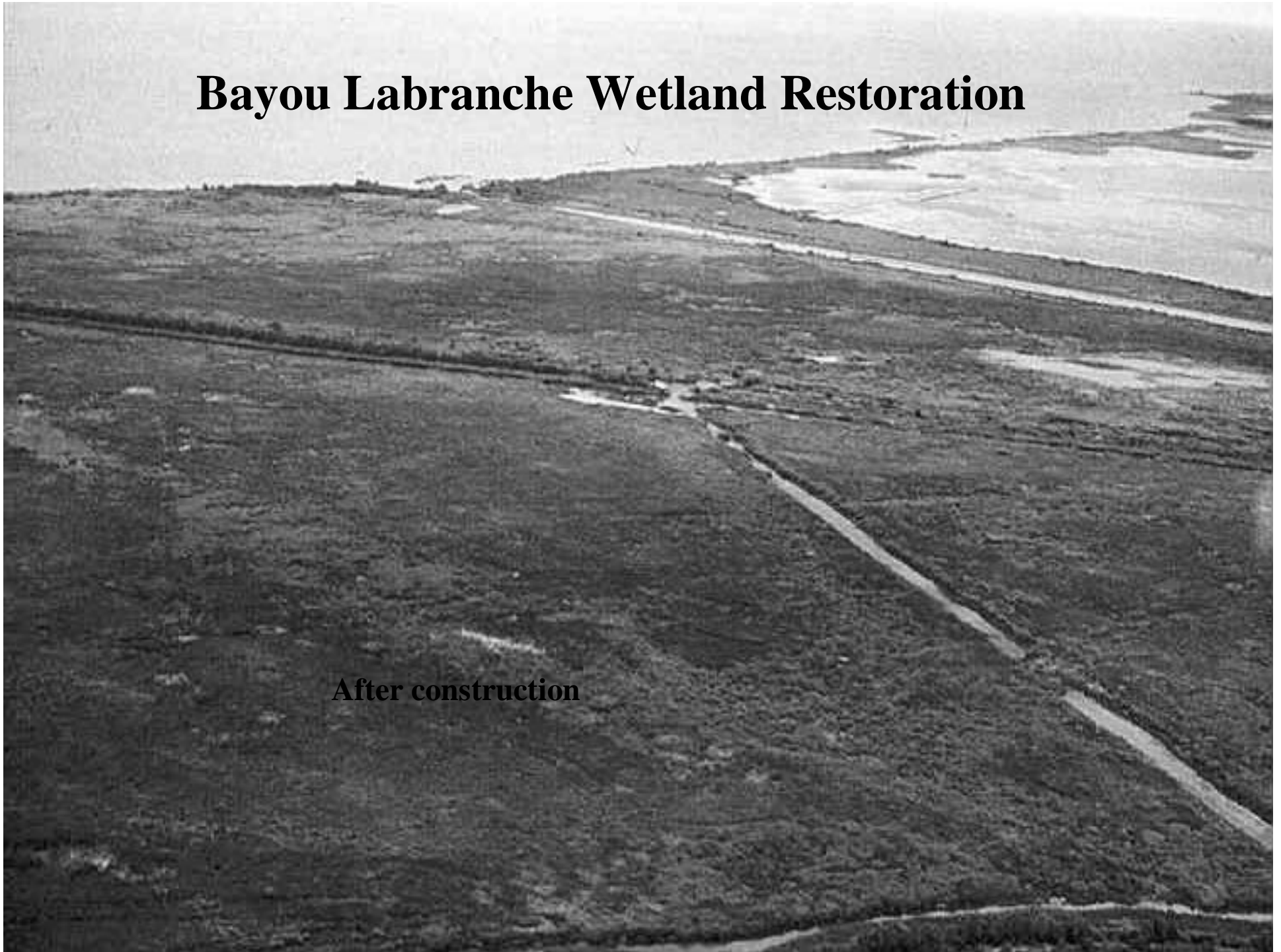
Bayou Labranche Wetland Restoration

Before construction



Bayou Labranche Wetland Restoration

After construction





Coast 2050 Proposed Strategies

Protect Shoreline

Keep shoreline in place in critical areas.

Maintain Shoreline Integrity

Let shore roll back, but prevent interior marsh erosion.

Maintain Sabine River Inflow

Maintain Atchafalaya Mudstream

Continue shoreline accretion along Chenier Plain.

Improve Hydrology/Drainage

Lower water levels in swamps. Allow more natural flow of water. Provide flood protection if necessary.

Reduce Sedimentation in Cote Blanche Bays and Vermilion Bay and Maintain as Brackish

Lower Water Levels

Modify flow patterns to tidal marshes to the south.

Move Fresh Water South into Tidal Marshes

Move Atchafalaya waters into tidal marshes in Chenier Plain. Use water from lakes to freshen southern brackish marshes.

Beneficial Use of Dredged Material or Dedicated Dredging

Create marsh in various sites along the coast.

Maximize Land Building in Atchafalaya Delta

Separate navigation from delta. Train levee toward Four League Bay.

Maintain Land Bridges

Preserve the three land bridges to prevent marine forces from moving inland and large lakes from joining.

Small Diversions from Mississippi River (<5,000 cfs)

Allow river water and nutrients to nourish swamps and marshes. Flood protection where needed. Provide outlet management.

Optimize Atchafalaya Flow to West and East

Use Atchafalaya sediments and nutrients to preserve marshes.

Conveyance Channel from Mississippi River to Build Deltas

Build marsh and nourish adjacent wetlands in areas of highest land loss.

Solve the Mississippi River Gulf Outlet Problem

Close MIGO when deep-draft container facilities are available on river. In interim, stabilize north bank, purchase oyster leases, create marsh in southern lobe of Lake Borgne.

Delta-building Diversions from Mississippi River (15,000-100,000 cfs)

Build marsh and nourish adjacent marsh. Address oyster issues.

Multi-purpose Control of Navigation Channels

Prevent saline waters from continuing to damage marshes to north. Retain fresh water.

Restore/maintain Barrier Islands, Headlands, Shorelands

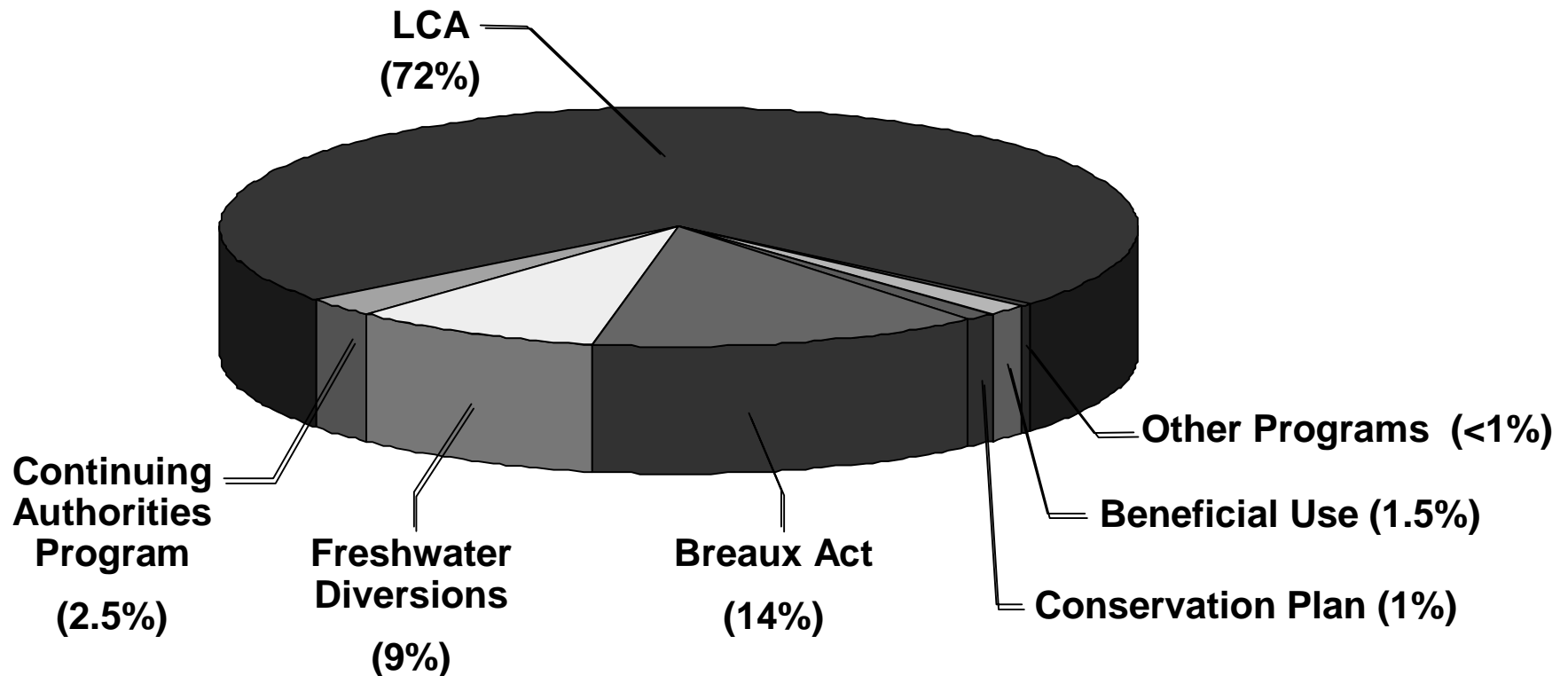
Use most cost-effective means to protect these first lines of defense from storms.

Prevent Loss of Sediments into the Deep Gulf

Separate navigation from riverine processes. Build sediment trap and pump out to create marsh.

Coast 2050 Ecosystem Strategies

Efforts to Stop Coastal Wetland Loss



**Total Annual Wetland Loss:
approximately 20,000 acres**

Comparison of LCA to Breaux Act

★ LCA

- **Comprehensive**
- **Streamline Processes**
- **Additional Agencies Involved**
- **Washington Level Task Force**
- **Multi Funding Sources**

★ Breaux Act

- **Site Specific**
- **Defined Process**
- **Specific Agencies Involved**
- **Field Level Task Force**
- **Specific Funding Source**

Use of Breaux Act?

- ★ **Test for larger solutions**
- ★ **Forms a basis for consensus**
- ★ **Forms basis for agency cooperation**
- ★ **Maintains continuity of project construction**
- ★ **Immediate responsiveness**
- ★ **Forum for resolution of issues**
- ★ **Provides the public involvement base**

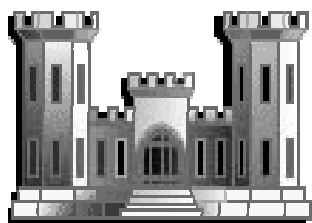
Linkages Between LCA & Breaux Act

★ Sharing resources

- Technical studies**
- Public involvement**

★ Agencies (participation and buy-in)

★ Co-location of staff



Co-location



Corps Personnel

Number

Discipline

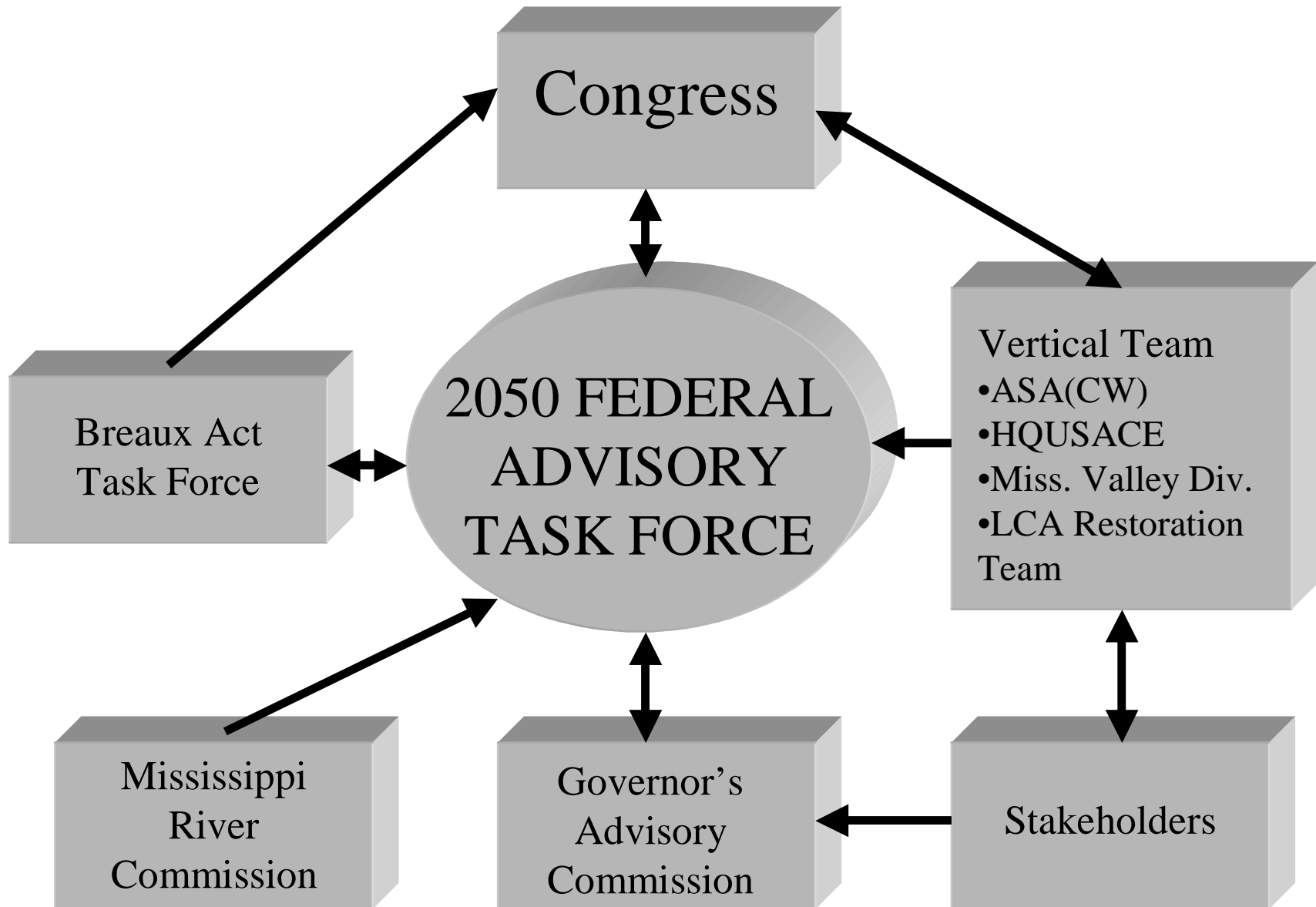
10	Breaux Act Staff
4	Environmental
1	Economist
1	Cost Engineer
1	Hydraulic Engr.
1	Geotechnical Engr.
2	Design Engineers
1	Senior Project Manager

Agencies

LA DNR
LA DOTD
EPA
USFWS
NMFS
USGS
WES
NRCS

Total Personnel = 30

Interaction of Interest Groups



Goals for WRDA 2002

- **Formation of the Federal Task Force in 2002**
- **Direct completion of the comprehensive report by July 2004**

LCA

Programmatic Authorization

- **Federal advisory task force**
 - **Structure**
 - **Chair – Assistant Secretary of the Army (Civil Works)**
 - **Members at assistant secretary level**
 - **Interior**
 - **EPA**
 - **Commerce**
 - **Agriculture**
 - **Energy**
 - **Transportation**
 - **Louisiana Reps from Governor's office**
 - **MRC reports to the commission**

LCA

Programmatic Authorization

- **Federal / State Funding Sources**
 - **Energy / Oil trust funds**
 - **Navigation / Fuel tax trust funds**
 - **CARA special authority to cost share**
 - **Corps appropriations**
 - **State appropriations, special taxes, user fees, etc.**
 - **Private contributions**

LCA

Programmatic Authorization

★ Comprehensive report coast-wide restoration program

- LCA comprehensive coast-wide strategy**
- Anticipated funding requirement of \$14 billion**
- Delegate three tiered individual project authorization**
- Programmatic Project Cooperation Agreement and supplement for each project**
- Other innovations**

LCA

Programmatic Authorization



Authority will fall into 3 Baskets:

Alternatives ready for engineering design

Alternatives requiring further design studies

Alternatives requiring additional planning studies & evaluation

Action Items

- ★ **Federal Advisory Task Force agencies & leadership**
- ★ **Establishment of an enduring Governor's Advisory Commission**
- ★ **Significant public involvement program**
- ★ **Innovative cost sharing & funding**
- ★ **Expedited implementation via a programmatic authorization**

